UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,325	08/24/2001	Stepan Sokolov	SUN1P846/P6753	5215

			EXAMINER
22434	7590	08/13/2004	LAO, SUE X

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ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/939,325	SOKOLOV, STEPAN
	Examiner	Art Unit
	S. Lao	2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-19_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _11-16_ is/are allowed.

6)☒ Claim(s) _1-10 and 17-19_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____ .

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _2/20/02, 3/24/03_.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

1.   Claims 1-19 are presented for examination.

2.   The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3.   Claims 1-10, 17-19 are rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1-30 of U. S. Patent No. 6,751,790 Sokolov et al. Although the conflicting claims are not identical, they are not patentably distinct from each other. In particular, as to claim 1, Sokolov teaches a Java computing environment, wherein said environment comprises: a Java string object representation suitable for representation of a Java string including one or more characters (Java string object, claim 1, lines 4-6); wherein said Java string is represented in an array of one byte characters in a memory portion of said Java computing environment (one byte characters, claim 1, lines 4-6); and wherein said Java string object representation includes an array representation flag (indicator), said

array representation flag being set to a first state to indicate that said Java string represents an array of one byte characters (indicate whether the java string object is represented as an array of one byte characters, claim 14, lines 5-9). As to claim 2, the conventional Java string data structure includes a length field, and specifying an object's class and referring to an array by reference are conventional to object-oriented languages (e.g., C++). As to claims 3, 4, Sokolov teaches at least one Java constructor suitable for instantiating said Java string object (col. 5, claims 2, 3), at least one Java method suitable for performing one or more operations on said Java string object (col. 5, claim 6), and said at least one Java constructor and said at least one Java method are provided in a Java library (col. 5, claim 5). As to claim 5, Sokolov teaches in a Java programming environment, a method of instantiation of a Java string object, said method comprising: receiving one or more characters (claim 21, line 4); determining whether an array of one-byte characters or an array of two-byte characters should be allocated to represent said Java string object (claim 7, lines 6-8); allocating an array of one-byte characters to represent said Java string object when said determining determines that said Java string object should be allocated as an array of one-byte characters (claim 21); setting an array representation flag to a first state when said determining determines that said Java string object should be allocated as an array of one-byte characters (claim 14); allocating an array of two-byte characters to represent said Java string object when said determining determines that said Java string object should be allocated as an array of two-byte characters (claim 30); and setting an array representation flag to a second state when said determining determines that said Java string object should be allocated as an array of two-byte characters (claim 14). As to claims 6-8, Sokolov teaches said determining and said allocation are performed by a Java constructor (claims 23, 28). As to claim 9, Sokolov teaches Java library (claims 24, 29). As to claim 10, Sokolov teaches one or more Java methods suitable for performing operations on said Java object (claim 6). As to claim 17, Sokolov teaches a computer readable media including computer program code for a Java library, said computer readable media comprising: computer program code for at least one Java constructor suitable for instantiating a Java string object (claims 23, 28); wherein said

computer program code for said at least one Java constructor can operate to allocate a Java string object as an array of one-byte characters (claim 21, lines 5-11); wherein said Java string object representation includes an array representation flag, said array representation flag being set to a first state to indicate that said Java string represents an array of one-byte characters (claim 14). As to claims 18 and 19, Sokolov teaches t least one Java method capable of performing one or more operations on said Java string object represented as an array of one-byte characters (claim 19), and said method is also capable of performing one or more operations on Java string objects represented as arrays of two-byte characters (claim 20).

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5.   Claims 1, 3, 4, 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Sokolov et al (U. S. Patent No. 6,751,790).

As to claim 1, Sokolov teaches a Java computing environment (Java computing environment, col. 2, lines 48-53), wherein said environment comprises: a Java string object representation suitable for representation of a Java string (Java string object) including one or more characters (one-byte characters, two-byte characters); wherein said Java string is represented in an array of one byte characters in a memory portion of said Java computing environment (one-byte characters, col. 3, lines 26-37); and wherein said Java string object representation includes an array representation flag (descriptor field 108), said array representation flag being set to a first state to indicate that said Java string represents an array of one byte characters (indicate the array object is stored as an array of one-byte characters, col. 3, lines 46-54).

As to claims 3, 4, Sokolov teaches at least one Java constructor suitable for instantiating said Java string object (constructor 208, col. 4, lines 15-31), at least one Java method suitable for performing one or more operations on said Java string object (col. 4, line 1-5), and provided in a Java library (col. 3, line 64 – col. 4, line 5).

As to claim 17, Sokolov teaches a computer readable media including computer program code for a Java library, said computer readable media comprising: computer program code for at least one Java constructor suitable for instantiating a Java string object (instantiating a Java string object, col. 3, lines 26-37); wherein said computer program code for said at least one Java constructor can operate to allocate a Java string object as an array of one-byte characters (constructor 208, col. 4, lines 15-31), wherein said Java string object representation includes an array representation flag (descriptor field 108), said array representation flag being set to a first state to indicate that said Java string represents an array of one-byte characters (indicate the array object is stored as an array of one-byte characters, col. 3, lines 46-54).

As to claims 18 and 19, Sokolov teaches t least one Java method capable of performing one or more operations on said Java string object represented as an array of one-byte characters and said method is also capable of performing one or more operations on Java string objects represented as arrays of two-byte characters (col. 4, line 60 – col. 5, line 15).

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 2, 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sokolov et al.

As to claim 2, by definition, Java string data structure includes a length field. Specifying an object's class in the object's data structure and referring to an array by reference are conventional to object-oriented languages (e.g., C++). Therefore, it would have been obvious to implement such concepts in Java string objects.

As to claim 5, note discussion of claim 1. Sokolov teaches in a Java programming environment, a method of instantiation of a Java string object, said method comprising: receiving one or more characters (step 302); determining whether an array of one-byte characters or an array of two-byte characters should be allocated to represent said Java string object (step 304); allocating an array of one-byte characters to represent said Java string object when said determining determines that said Java string object should be allocated as an array of one-byte characters (step 306); setting an array representation flag to a first state when said determining determines that said Java string object should be allocated as an array of one-byte characters (descriptor field 108, col. 3, lines 53-54); allocating an array of two-byte characters to represent said Java string object when said determining determines that said Java string object should be allocated as an array of two-byte characters (step 308).

Sokolov does not explicitly teach setting an array representation flag to a second state when said determining determines that said Java string object should be allocated as an array of two-byte characters. However, since Sokolov teaches two configurations of the representations (one-byte and two-byte) and a flag / array representation flag in one condition to indicate one configuration (one-byte characters), it would have been obvious to use another condition of the flag (e.g., binary 'on' or 'off', '1' or '0') to indicate another configuration (two-byte characters).

As to claims 6-8, Sokolov teaches said determining and said allocation are performed by a Java constructor (constructor 208, col. 4, lines 15-31).

As to claim 9, Sokolov teaches Java library (col. 3, line 64 – col. 4, line 5).

As to claim 10, Sokolov teaches one or more Java methods suitable for performing operations on said Java object (methods operating, col. 4, lines 15-31).

8.   Claims 11-16 are allowed.

9.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue Lao whose telephone number is (703) 305-9657. A voice mail service is also available at this number. The examiner's supervisor, SPE Meng-Ai An, can be reached on (703) 305 9678. The examiner can normally be reached on Monday - Friday, from 9AM to 5PM. The fax phone number for the organization where this application or proceeding is assigned is (703) 872 9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

Sue Lao
August 4, 2004

**SUE LAO
PRIMARY EXAMINER**